

## WHAT IS CLAIMED IS:

## 1. A hydrogen-occlusion container comprising:

5 a liner which is designed as an inner lining  
made of metal or resin;  
a fiber-reinforced resin layer provided outside  
the liner;  
a hydrogen-occlusion alloy which is located  
inside the liner and in which hydrogen is occluded; and  
10 an air gap portion which exists inside the  
liner and which is filled with hydrogen gas whose  
pressure is above a plateau equilibrium pressure of  
hydrogen gas inherent in the hydrogen-occlusion alloy at  
a temperature of a location where the hydrogen-occlusion  
15 container is installed.

2. The hydrogen-occlusion container according to  
claim 1, further comprising:

20 a heat exchanger which is located in the liner.

3. The hydrogen-occlusion container according to  
claim 2, wherein

25 the heat exchanger is an aluminum pipe through  
which water flows.

4. The hydrogen-occlusion container according to  
claim 1, further comprising:

30 a substance which exists in the liner and which  
has a melting point ranging from  $-10^{\circ}\text{C}$  to  $100^{\circ}\text{C}$ .

5. The hydrogen-occlusion container according to  
claim 1, wherein

hydrogen gas with which the air gap portion is filled is at a pressure ranging from 25MPa to 50MPa.

5        6. The hydrogen-occlusion container according to claim 1, wherein

             a ratio of a volume of the air gap portion to an internal volume of the liner ranges from 60% to 40% when no hydrogen is occluded in the hydrogen-occlusion alloy.

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             7. A method of occluding hydrogen into a hydrogen-occlusion container, comprising the steps of:

             introducing hydrogen gas whose pressure is above a plateau equilibrium pressure of hydrogen gas inherent in a hydrogen-occlusion alloy at a temperature of a location where the hydrogen-storage container is installed, into the hydrogen-occlusion container in which the hydrogen-occlusion alloy is accommodated; and

             causing the hydrogen-occlusion alloy to occlude hydrogen while filling an air gap portion formed in the hydrogen-occlusion container with the hydrogen gas.

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